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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,601

02/12/2004

Daniel Alvarez

CIS0208US

4921

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EXAMINER

PHUNKULH, BOB A

ART UNIT

PAPER NUMBER

2619

MAIL DATE

DELIVERY MODE

11/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/777,601

Applicant(s)

ALVAREZ ET AL.

Examiner

Bob A. Phunkulh

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,8-13,15,16,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 6,7,17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This communication is in response to applicant's 09/17/2007 amendment(s)/response(s) in the application of **ALVAREZ et al.** for "**PIM SPARSE MODE TO SOURCE SPECIFIC MULTICAST CONVERSION**" filed 02/12/2004. The amendment/response to the claims have been entered. Claims 2-3, and 14 have been canceled. No claims have been added. Claims 1, 4-13, 15-20 are now pending.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-5, 8-13, 15-16, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over SUZUKI (US 2004/0100983).

Regarding claim 1, *SUZUKI* discloses a method comprising:

receiving a first multicast routing protocol (MRP) message, wherein the first MRP message is a request to join a multicast group (see paragraph [0018]);

translating the first MRP message into a second MRP message (see paragraph [0018]),

wherein the second MRP message is a request to join the multicast group of receivers to which data is being provided by a specific source (see paragraph [0018]).

*SUZUKI* fails to disclose that the receiving and the translating of the request are performed by a rendezvous point (RP) router.

However, *SUZUKI* discloses that the multicast communication network comprises of a plurality of multicast routers 110, 121, 122, where one of the multicast router (i.e. multicast router 121) is defined as rendezvous point router by the network administrator (see figure 1 and paragraphs [0044, 0047]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to define the multicast router 110 by the administrator as rendezvous point router in order process the request, from multicast node 100, quickly and efficiently as possible without having to route the request to another router i.e. multicast router 121.

Regarding claim 4, *SUZUKI* discloses the RP router is contained in a first network that operates according to a first multicast routing protocol, wherein the specific source is contained in a second network that operates according to a second multicast routing operating protocol, and wherein the first and second multicast routing operating protocols are different from each other (see paragraph [0018]).

Regarding claim 5, *SUZUKI* discloses the first network contains a plurality of routers including the RP router, wherein the second network contains a plurality of routers, and wherein the RP router is positioned within the first network such that data

transmitted by RP router to the second network does not pass through another router of the first network (see figure 1).

Regarding claim 8, *SUZUKI* discloses translating comprises: inputting first data into a look-up table (LUT), wherein the first data comprises an identity of the multicast group of receivers; the LUT outputting second data in response to inputting first data, wherein the second data comprises an identity of the specific source (the router comprises a table, see paragraph [0018]).

Regarding claim 9, *SUZUKI* discloses the LUT can be stored in memory of the device that translates the first MRP message into the second MRP message or stored in remote memory accessible using a communication protocol (multicast source address table 220, see figure 2).

Regarding claim 10, *SUZUKI* discloses the router is contained in a sparse mode (SM) communication network and wherein the second MRP message is configured for subsequent transmission to a source specific mode (SSM) communication network (between any-source multicast protocol and source specific multicast, see abstract and paragraph [0056]).

Regarding claim 11, *SUZUKI* discloses an apparatus (multicast router 110, see figure 1) comprising:

a processor; a first memory coupled to the processor, wherein the first memory stores instructions executable by the processor; wherein the processor implements a method in response to executing the instructions, the method comprising:

translating a first MRP message into a second MRP message, wherein the first MRP message is a request to join a multicast group of receivers, and wherein the second MRP message is a request to join the multicast group of receivers to which data is being provided by a specific source (see paragraph [0018]).

*SUZUKI* fails to disclose that the receiving and the translating of the request are performed by a rendezvous point (RP) router.

However, *SUZUKI* discloses that the multicast communication network comprises of a plurality of multicast routers 110, 121, 122, where one of the multicast router (i.e. multicast router 121) is defined as rendezvous point router by the network administrator (see figure 1 and paragraphs [0044, 0047]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to define the multicast router 110 by the administrator as rendezvous point router in order process the request, from multicast node 100, quickly and efficiently as possible without having to route the request to another router i.e. multicast router 121.

Regarding claim 12, *SUZUKI* discloses an apparatus (multicast router 110, see figure 1) comprising:

means for receiving a first multicast routing protocol (MRP) message, wherein the first MRP message is a request to join a multicast group of receivers (see paragraph [0018]);

means for translating the first MRP message into a second MRP message, wherein the second MRP message is a request to join the multicast group of receivers to which data is being provided by a specific source (paragraph [0018]).

*SUZUKI* fails to disclose that the receiving and the translating of the request are performed by a rendezvous point (RP) router.

However, *SUZUKI* discloses that the multicast communication network comprises of a plurality of multicast routers 110, 121, 122, where one of the multicast router (i.e. multicast router 121) is defined as rendezvous point router by the network administrator (see figure 1 and paragraphs [0044, 0047]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to define the multicast router 110 by the administrator as rendezvous point router in order process the request, from multicast node 100, quickly and efficiently as possible without having to route the request to another router i.e. multicast router 121.

Regarding claim 13, *SUZUKI* discloses a memory medium storing instructions readable and executable by a router comprising a processor, wherein the router performs a method in response to executing the instructions, the method comprising:

translating a first MRP message into a second MRP message, wherein the first MRP message is a request to join a multicast group of receivers, and wherein the second MRP message is a request to join the multicast group of receivers to which data is being provided by a specific source (see paragraph [0018]).

*SUZUKI* fails to disclose that the receiving and the translating of the request are performed by a rendezvous point (RP) router.

However, *SUZUKI* discloses that the multicast communication network comprises of a plurality of multicast routers 110, 121, 122, where one of the multicast router (i.e. multicast router 121) is defined as rendezvous point router by the network administrator (see figure 1 and paragraphs [0044, 0047]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to define the multicast router 110 by the administrator as rendezvous point router in order process the request, from multicast node 100, quickly and efficiently as possible without having to route the request to another router i.e. multicast router 121.

Regarding claim 15, *SUZUKI* discloses the RP router is contained in a first network that operates according to a first multicast routing protocol, wherein the specific source is contained in a second network that operates according to a second multicast routing operating protocol, and wherein the first and second multicast routing operating protocols are different from each other (see paragraphs [0018, 0056]).



Regarding claim 16, *SUZUKI* discloses the first network contains a plurality of routers including the RP router, wherein the second network contains a plurality of routers, and wherein the RP router is positioned within the first network such that data transmitted by RP router to the second network does not pass through another router of the first network (see figure 1).

Regarding claim 19, *SUZUKI* discloses translating comprises: inputting first data into a look-up table (LUT), wherein the first data comprises an identity of the multicast group of receivers; the LUT outputting second data in response to inputting first data, wherein the second data comprises an identity of the specific source (the router comprises of tables, see paragraphs [0018, 0026]).

Regarding claim 20, *SUZUKI* discloses the router is contained in a sparse mode (SM) communication network and wherein the second MRP message is configured for subsequent transmission to a source specific mode (SSM) communication network (see paragraphs [0018, 0056]).

***Allowable Subject Matter***

Claims 6-7, 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments with respect to claims 1, 4-13, 15-20 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

**Any response to this action should be mailed to:**

The following address mail to be delivered by the United States Postal Service (USPS) only:

Mail Stop \_\_\_\_\_  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**or faxed to:**

(571) 273-8300, (for formal communications intended for entry)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(571) 272-3083**. The examiner can normally be reached on Monday-Tuesday from 8:00 A.M. to 5:00 P.M. (first week of the bi-week) and Monday-Friday (for second week of the bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor **Jay Patel**, can be reach on **(571) 272-2988**. The fax phone number for this group is **(571) 273-8300**.

Art Unit: 2619

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bob A. Phunkulh  
Primary Examiner  
TC 2600  
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November 28, 2007

**BOB PHUNKULH  
PRIMARY EXAMINER**